Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-20. (cancelled)

21. (previously presented) A method for controlling hydrocarbon injection into an engine exhaust to reduce NOx in such exhaust, such engine exhaust with the NOx and the injected hydrocarbon being directed to a catalyst for reaction therein, comprising:

(a) identifying catalyst light-off by detecting production of an exothermic reaction across the catalyst when a temperature difference across the catalyst exceeds a threshold value;

(b) determining a light-off temperature of the catalyst by measuring the temperature at which the exothermic reaction is detected;

(c) obtaining a measure of catalyst aging based on said detected temperature; and

(d) adjusting injection of the hydrocarbon into the reaction in accordance with the measure of catalyst aging.

22. (previously presented) The method of claim 21 wherein said exothermic reaction is detected by a pair of sensors each detecting a common parameter in the exhaust, one of such sensors being upstream of the catalyst and the other one of the sensors being downstream of the first sensor.

23. (previously presented) The method of claim 22 wherein said hydrocarbon injection is based on the pair of sensors.

24. (previously presented) The method of claim 22 wherein said pair of sensors is a pair of temperature sensors.

25. (currently amended) A method for controlling hydrocarbon injection into an engine exhaust to reduce NOx in such exhaust, such engine exhaust with the NOx and the injected hydrocarbon being directed to a catalyst for reaction therein, comprising:

(a) identifying catalyst light-off by detecting production of an exothermic reaction across the catalyst when a temperature difference across the catalyst exceeds a threshold value;

(b) determining a light-off temperature of the catalyst by measuring the temperature at which the exothermic reaction is detected; and

(c) adjusting injection of the hydrocarbon into the reaction in accordance with the ~~measure of catalyst aging~~ **determined light-off temperature**.

26. (previously presented) The method of claim 25 wherein said exothermic reaction is detected by a pair of sensors each detecting a common parameter in the exhaust, one of such sensors being upstream of the catalyst and the other one of the sensors being downstream of the first sensor.

27. (previously presented) The method of claim 26 wherein said hydrocarbon injection is based on the pair of sensors.

28. (previously presented) The method of claim 26 wherein said pair of sensors is a pair of temperature sensors.